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Attorney Docket No. **IMMR-046/02US**

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of Erik J. SHAHOIAN *et al.*

Serial No.: 10/782,939

Examiner: Unassigned

Filed: February 23, 2004

Art Unit: 2674

Confirmation No.: 7661

COPY

For: **HAPTIC FEEDBACK DEVICE WITH BUTTON FORCES**

U.S. Patent and Trademark Office
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INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Enclosed is an Information Disclosure Statement and accompanying Form PTO/SB/08A for the above-identified patent application.

- ☒ [x] In accordance with 37 C.F.R. §1.97(b), no additional fee for submission of the IDS is required.
- ☐ [] In accordance with 37 C.F.R. §1.97(c), also enclosed is:
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- ☐ [] In accordance with 37 C.F.R. §1.97(d), a statement as specified in 37 C.F.R. §1.97(e) and the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) are also enclosed.
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Application Serial No.: 10/782,939
Attorney Docket No.: IMMR-046/02US

Page 2

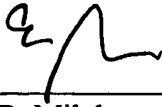
The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283.

Dated: September 30, 2004

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By:



Erik B. Milch
Reg. No. 42,887



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Docket No.: IMMR-0052B (034701-000342)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Erik J. Shahoian et al.
SERIAL NO.: 10/782,939 CONFIRMATION NO.: 7661
FILING DATE: February 23, 2004
TITLE: Haptic Feedback Device With Button Forces
EXAMINER: Xiao Min Wu
ART UNIT: 2674

CERTIFICATE OF MAILING

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Dear Sir:

It is respectfully requested that the Patent Office acknowledge the Information Disclosure Statements (IDS) as filed with the U.S. Patent Office on September 30, 2004. The art in said IDS was originally provided to the PTO on CD. Today we are providing paper copies of each non-patent publication listed. We respectfully request that you provide us with a signed-off copy of the attached indicating the acknowledgement of this IDS.

Respectfully submitted
THELEN REID & PRIEST LLP

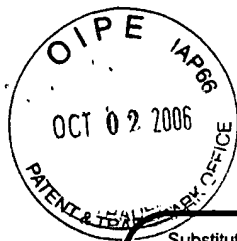
Dated:

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 3

Complete if Known

Application Number 10/782,939

Filing Date February 23, 2004

First Named Inventor Erik J. Shahoian

Art Unit 2674

Examiner Name Unassigned

Attorney Docket Number IMMR046/02US

U.S. PATENT DOCUMENTS					
Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		6,422,941	7/23/2002	Thomer et al.	
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		2,972,140	2/14/1961	Hirsch	

Examiner
Signature

Date
Considered

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Applicant's unique citation designation number (optional). ³ Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁷ Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet **2** of **3**

Complete if Known

Application Number	10/782,939
Filing Date	February 23, 2004
First Named Inventor	Erik J. Shahoian
Art Unit	2674
Examiner Name	Unassigned
Attorney Docket Number	IMMR046/02US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990.
		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," <i>Bachelor of Science Thesis</i> , MIT, May 1983, archived June 23, 1983.
		WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report 1230</i> , Naval Ocean Systems Center, San Diego, July 1988.
		BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970.
		JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," <i>Armstrong Aerospace Medical Research Laboratory</i> , AAMRL-TR-90-039, August, 1990.
		KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," <i>PRESENCE</i> , 4(4):387-402, Harvard Univ., 1995.
		AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.
		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," <i>DSC-Vol. 55-1, Dynamic Systems and Control: Volume 1</i> , ASME 1994.
		GOBEL et al., "Tactile Feedback Applied to Computer Mice," <i>International Journal of Human-Computer Interaction</i> , Vol. 7, No. 1, pp. 1-24, 1995.
		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 nd Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.
		"Cyberman Technical Specification," <i>Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide</i> , 4/5/1994.
		OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95</i> , Seoul, Korea, 21-24 August 1995.
		KACZMAREK et al., "Tactile Displays," <i>Virtual Environment Technologies</i> , Chap. 9, pp. 349-414.
		LAKE, "Cyberman from Logitech," at http://www.biblio.org/GameBytes/issue21/greviews/cyberman.html , 1994.
		YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," <i>Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems</i> , Raleigh, NC, July 7-10, 1992

Examiner Signature	Date Considered
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* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 3 of 3

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Application Number	10/782,939
Filing Date	February 23, 2004
First Named Inventor	Erik J. Shahoian
Art Unit	2674
Examiner Name	Unassigned
Attorney Docket Number	IMMR046/02US

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		NOLL, "Man-Machine Tactile," <i>SID Journal</i> , July/August 1972 Issue.	
		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," <i>Ph.D. Dissertation</i> , Stanford University, June 1994.	

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Attorney Docket No. IMMR-046/02US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of Erik J. SHAHOIAN et al.

Serial No.: Unassigned

Examiner: Unassigned

Confirmation No.: Unassigned

Art Unit: Unassigned

Filed: Herewith

For: HAPTIC FEEDBACK DEVICE WITH BUTTON FORCES

Filed 2/23/04
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Customer Window, Mail Stop Patent Application
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INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97(b)

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56,
Applicant(s) hereby submits the following information in conformance with 37 C.F.R.
§§1.97 and 1.98.

- ☐ Pursuant to 37 C.F.R. §1.98, a copy of each document cited in the attached Form PTO/SB/08 is enclosed.
- ☒ No copies of the publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No. 09/741,310 to which the above-identified application claims priority under 35 U.S.C. §120.
- ☐ Publication(s) ___ listed on the attached Form PTO/SB/08A were cited in a foreign search or examination report corresponding to ___ application serial no. ___ and mailed on ___.
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- ☐ Enclosed is an explanation of non-English publication(s) ___ for which an English translation is not available.
- ☐ Enclosed is an English translation of non-English publication(s) ___ cited in the attached Form PTO/SB/08A.
- ☐ Enclosed is a copy of pending patent Application Serial No. ___.

This Information Disclosure Statement is filed within any one of the following time periods:

- ☒ within three months from the filing date of this national application other than a CPA under 37 C.F.R. § 1.53(d);
- ☐ within three months from the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in this international application;
- ☐ before the mailing date of a first office action on the merits; or
- ☐ before the mailing of a first office action after the filing of a request for continued examination under 37 C.F.R. § 1.114.


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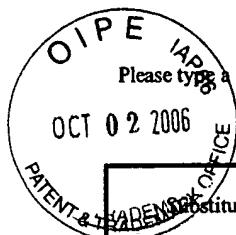
Dated: February 23, 2004

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Respectfully submitted,
COOLEY GODWARD LLP

By: _____


Erik B. Milch
Reg. No. 42,887



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PTO/SB/08A (08-00)

Institute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
Application Number					
Filing Date		Herewith			
First Named Inventor		Erik SHAHOIAN			
Group Art Unit					
Examiner Name					
Sheet	1	of	9	Attorney Docket Number	
				IMMR-046/02US	

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
		6,243,078		Rosenberg	06/2001
		6,219,032		Rosenberg et al.	04/17/2001
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¹ Unique citation designation number.

² See attached Kinds of U.S. Patent Documents.

Examiner Signature		Date Considered	
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STATEMENT BY APPLICANT**

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Complete if Known

Sheet	2	of	9	Application Number	
				Filing Date	Herewith
				First Named Inventor	Erik SHAHOIAN
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	IMMR-046/02US

	5,767,839		Rosenberg	06/16/1998
	5,757,358		Osga	05/26/1998
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Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Complete if Known

Application Number	
Filing Date	Herewith
First Named Inventor	Erik SHAHOIAN
Group Art Unit	
Examiner Name	
Attorney Docket Number	IMMR-046/02US

Sheet 3 of 9

	5,355,148	Anderson	10/11/1994
	5,354,162	Burdea et al.	10/11/1994
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